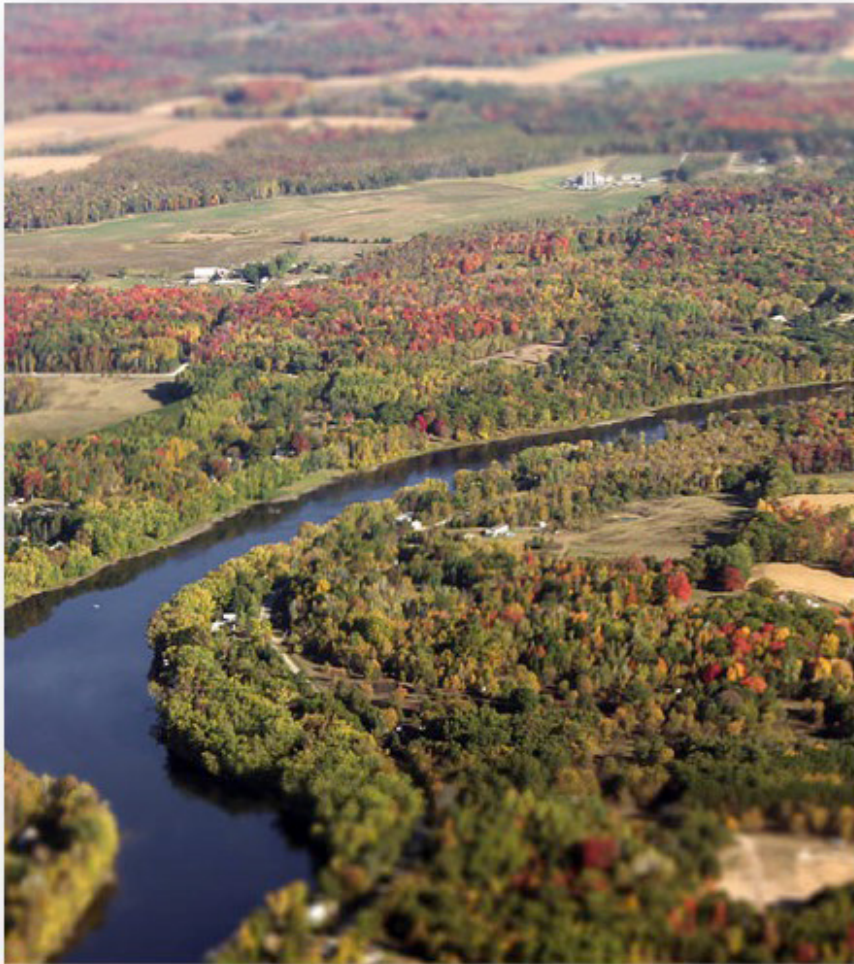


Open Pit Sulfide Mining on the Menominee River?

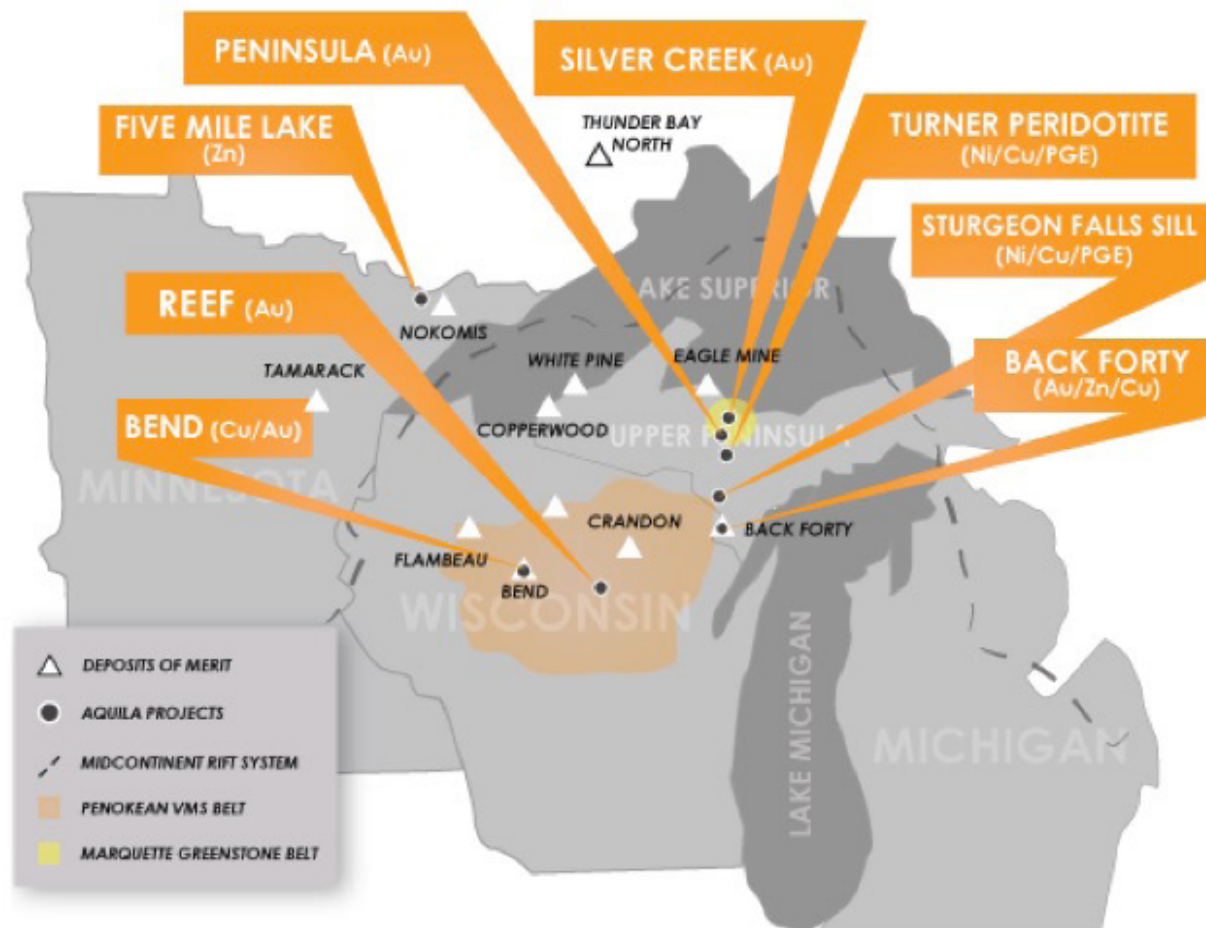


- Al Gedicks
- Dept. of Sociology
- University of
- Wisconsin-La Crosse

Aquila Resources wants to develop an open pit (2000 ft. wide and 850 ft. deep) massive gold-zinc sulfide mine 150 feet from the the Menominee River which forms the boundary between Michigan and Wisconsin.



Aquila's Back Forty project is one of several existing or proposed mines across Michigan, Wisconsin and Minnesota.



The Menominee River is the largest river system in the Upper Peninsula with a 4,000 square mile drainage area.



- The watershed supports a sturgeon spawning area with strong populations of small mouth bass, walleye, northern pike and trout.
- Culturally significant as a major prehistoric travel corridor for indigenous peoples and the source of Creation for the Menominee people.

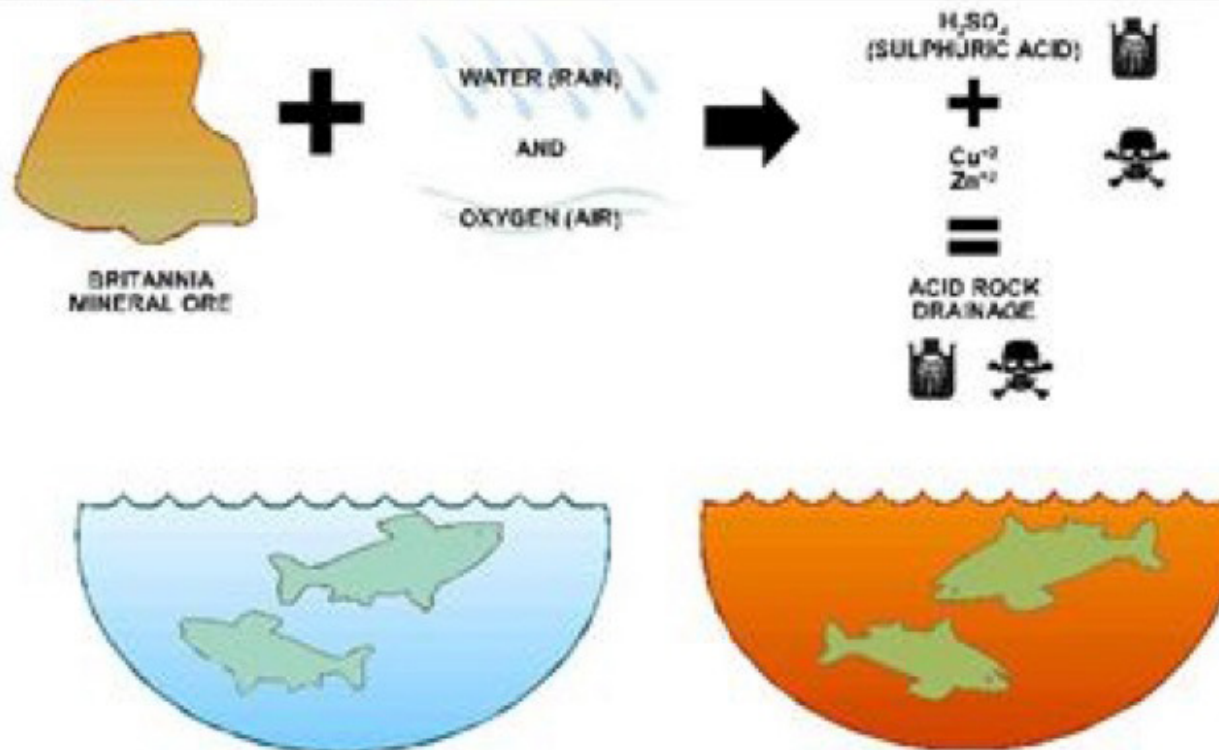
Dewatering the mine pit can lower groundwater levels around the mine, harming the Shakey Lakes Savanna, a 1,520-acre Natural Area, part of the Escanaba State Forest.



Metallic sulfide mines in the United States will pollute up to 27 billion gallons of fresh water per year. The main reason is acid mine drainage which occurs when mineral deposits containing sulfides are exposed to air and water during excavation.

Figure 1: Britannia Mine - What is Acid Mine Drainage?

The natural mineralization at Britannia contains metal sulphides which when exposed to air and water react to form a sulphuric acid solution containing dissolved metals. This mixture is known as Acid Rock Drainage or Acid Mine Drainage and can be very toxic to aquatic life.

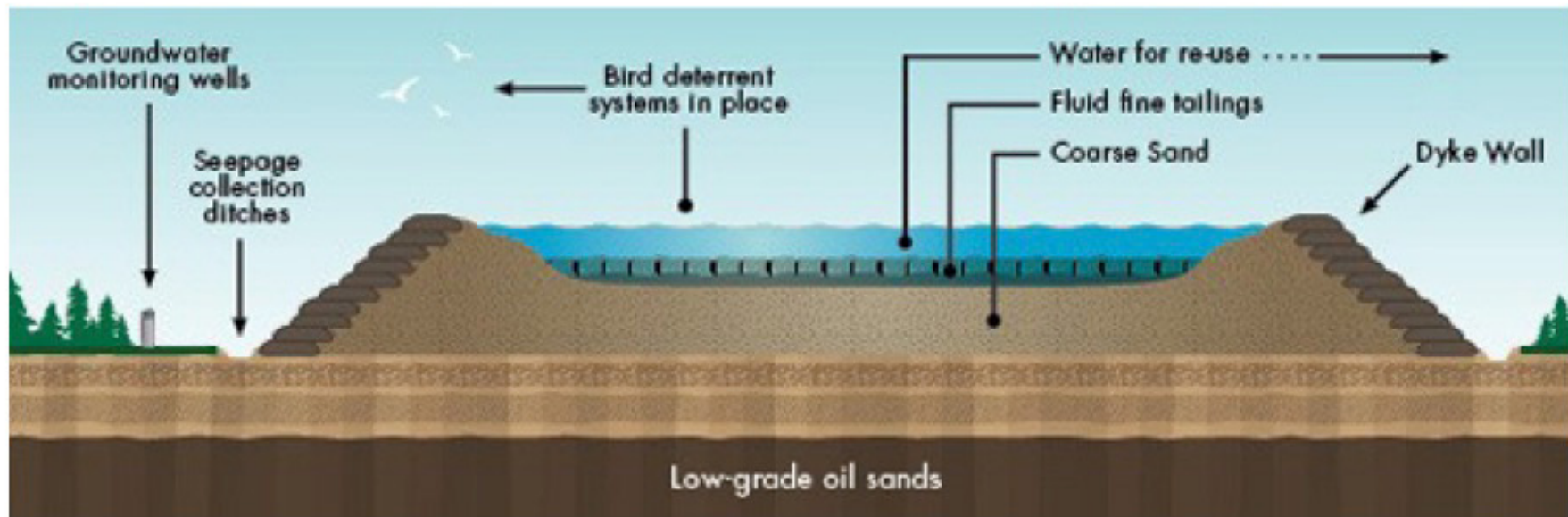


Metallic sulfide mining has contaminated 12,000 miles of rivers and streams in the United States.



- When exposed to air and water the resulting sulfuric acid can release harmful metals like arsenic, lead and mercury into surface and groundwaters, threatening local water supplies and human health.

The vast majority (97%) of the rock excavated ends up as sulfide-bearing waste rock that is stored in tailings dams at the mine site. The waste contains cyanide used to extract gold during processing on-site.



Poorly regulated tailings frequently discharge wastes into the environment, as in the January 2000 spill of 100 tons of cyanide contaminated water at the Aurul gold processing plant in Baia Mare on the Romanian-Hungarian border.

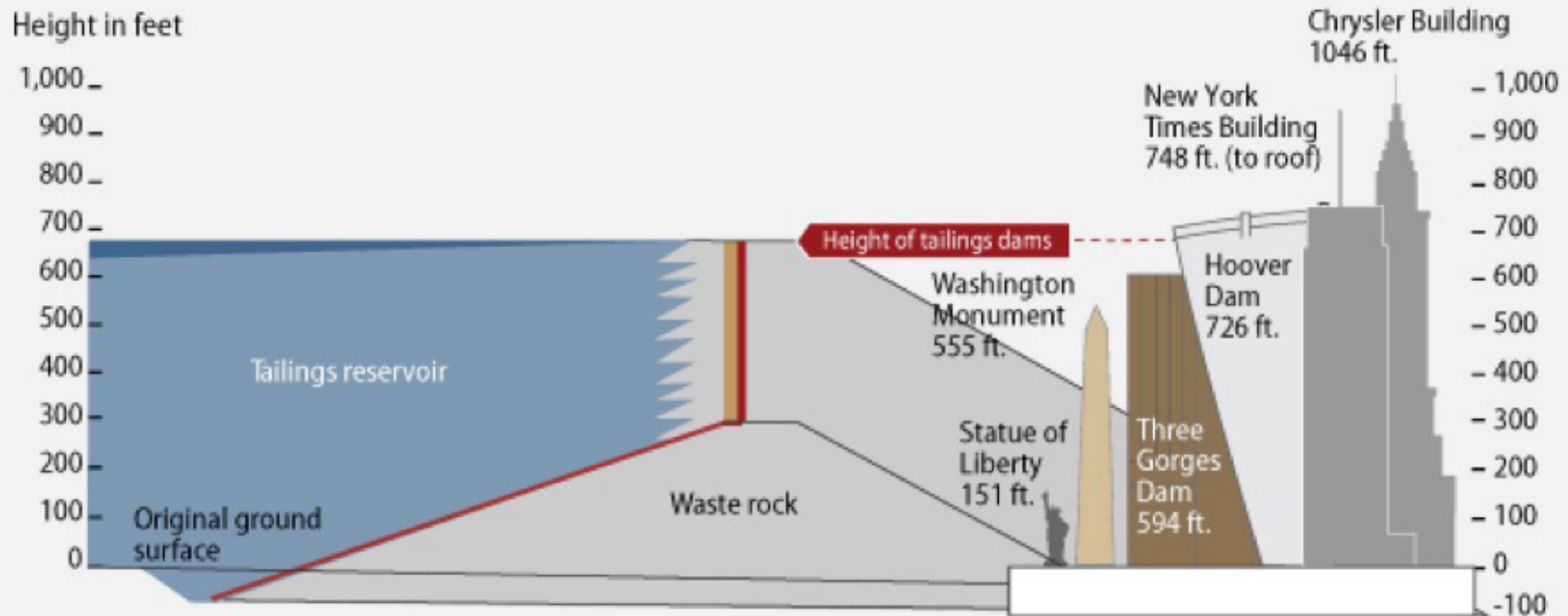


- More than 1400 tons of fish died as a result of this accident that also destroyed the livelihood for some hundred fishermen along the Tisza River in Hungary.
- In some Romanian and Hungarian towns the drinking water supply had to be shut down for some days.
- After 51 spills and dam breaches over a decade, Montana voters banned the use of cyanide in mining in 1998; the Czech Republic banned it in 2000.

A new study reveals that catastrophic mine waste failures are increasing in frequency, severity and costs all around the world. Nearly half of all recorded serious failures happened in modern times, between 1990 and 2010.

Pebble Project tailings dams

The estimated height of the proposed Pebble Project tailings dams compared to well-known existing dams and landmarks. Waste rock will be used to build massive dams for permanent storage of flooded toxic tailings (acid-generating rock) and other chemical waste.



Source: Wild Salmon Center, "Tailings Storage Facilities," 2012, available at <http://www.wildsalmoncenter.org/pebble/pebblefacts>

On August 4, 2014, more than a billion gallons of mining waste spilled into rivers from a tailings dam at Imperial Metals' Mount Polley gold and copper mine at the headwaters of the Fraser River watershed in British Columbia.



Jon Cherry, Kennecott's former project manager for the Eagle Project in the U.P. and President of Polymet in Minnesota, has been using the still-polluting Flambeau mine in Ladysmith, Wisconsin as a success story for sulfide mining.



- “Over the border in Wisconsin, Kennecott operated the 180 acre Flambeau copper mine right next to the Flambeau River for five years without a single environmental incident. That mine has now been closed for ten years without any further incident, and we’ve just received a Certificate of Completion which means that we’ve fulfilled all our obligations and have been refunded 80 per cent of our bond, the largest amount allowed.” Jon Cherry, March 2008.

Kennecott/Rio Tinto's Flambeau open pit copper-gold mine operated from 1993 to 1997. Fourteen years after mining operations ended, water samples on the site of the Flambeau mine near Ladysmith show high levels of toxic pollutants.



JOURNAL SENTINEL

HIGH-SCORING PACKERS

They lead in points for 1st time since '96 **Sports** Aaron Rodgers

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Extreme times, extreme couponing **Food**

HAPPY MEALS

Beat the darkness with bright, fun food **Nancy Stohs / Food**

PULITZER PRIZE WINNER, 2008, 2010, 2011

While lawmakers consider easing restrictions on mining, monitoring shows elevated copper and zinc levels in stream at closed Flambeau site

This photo shows the Flambeau Mine site in 2006, nine years after it closed. Much of the site has been reclaimed, with trails, forests and wetlands, but some tests still show elevated levels of copper and zinc in a stream on the property.

Tests find toxins at model mine

By LIZ HENNINGER
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Fourteen years after mining operations ended, water samples on the site of the Flambeau mine near Ladysmith show high levels of toxic pollutants.

In the most recent tests, state records show that copper and zinc levels have exceeded state toxicity standards for surface waters, potentially threatening fish and other aquatic life.

The findings come as mining regulations become as a legislative issue this fall, and the Flambeau site has been cited as a model of mineral extraction without environmental harm. Lawmakers are poised to rewrite mining laws and ease restrictions after Governor Tomkowiak, based in Wausau, put plans on hold this year for a \$1.5 billion new mine until regulations are strengthened.

Deadly force bill passes

But Senate delay could stall bid to shield homeowners

By JASON KIRBY
and PATRICK MULLIGAN
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Madison — Homeowners using deadly force against intruders would get powerful legal protection, under a bill approved by the Assembly late Tuesday.

The bill passed on a bipartisan 73-24 vote and now goes next to the Senate, which like the Assembly is controlled by Republicans. But it was unclear Tuesday if the Senate would take it up Wednesday, the only day it is slated to be in session this week.

If the Senate doesn't vote on it Wednesday, it may not consider the bill until January or later because after this week the Legislature isn't scheduled to be on the floor for the rest of the year.

Rep. Fred Kruse (D-Milwaukee), a former judge, criticized the bill and said that Republicans were wrong to focus on issues like the deadly force bill and the state's new concealed carry law rather than on the state's struggling economy.

"I am deeply troubled with the whole trend," Kruse said. "I am troubled with the fact that in this job session we are not dealing

PHOTO BY HENNINGER, 2A

Gun permit applications flooding in

In July 2012, U.S. District Court Judge Barbara Crabb ruled that the Flambeau Mining Company had violated the Clean Water Act on numerous counts by discharging toxic pollutants into a tributary of the Flambeau River on a repeated basis over the years.

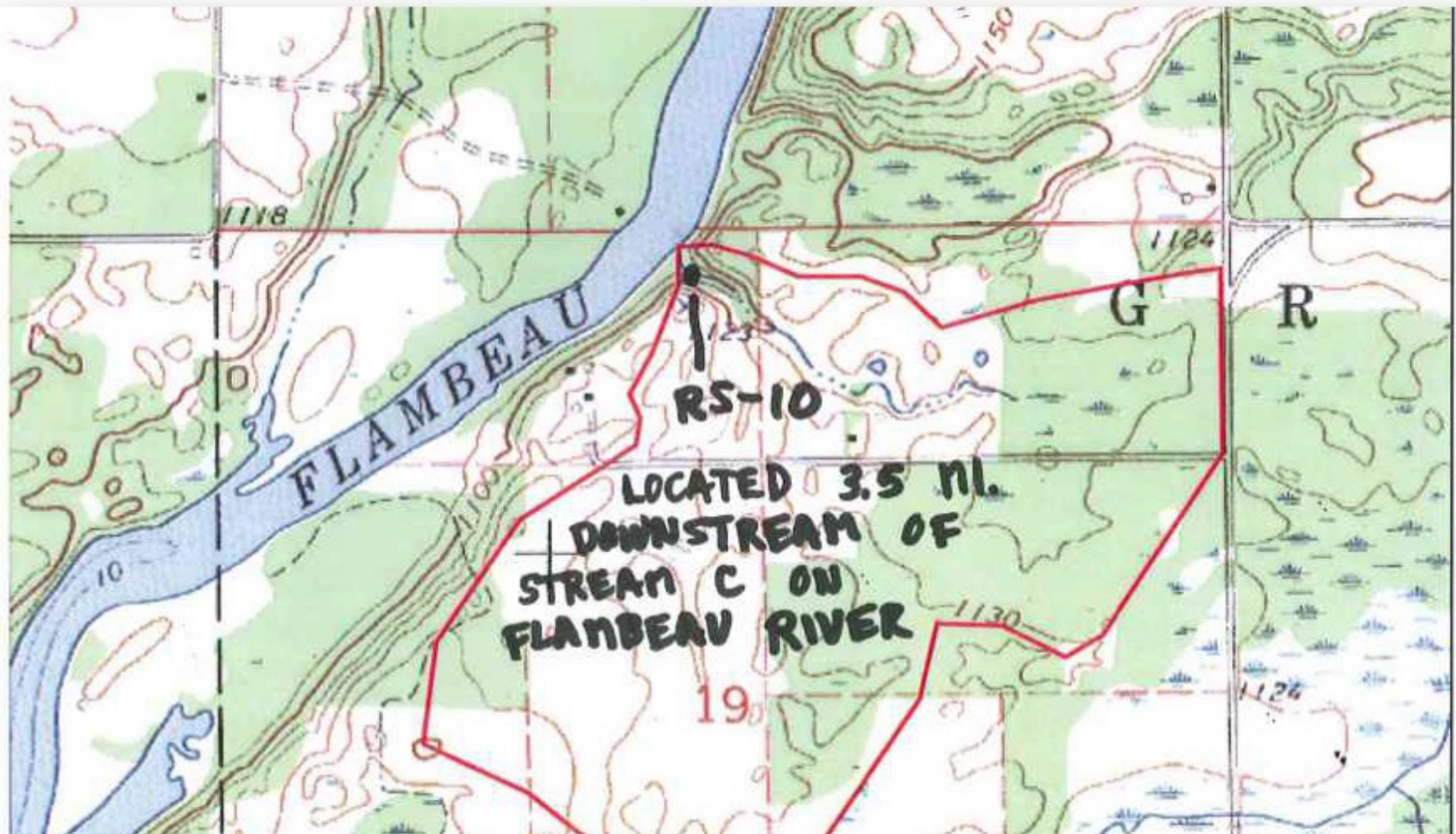


Flambeau Mining Company's (FMC) violation of the Clean Water Act was overturned by the 7th Circuit U.S. Court of Appeals in August 2013 on a technicality.



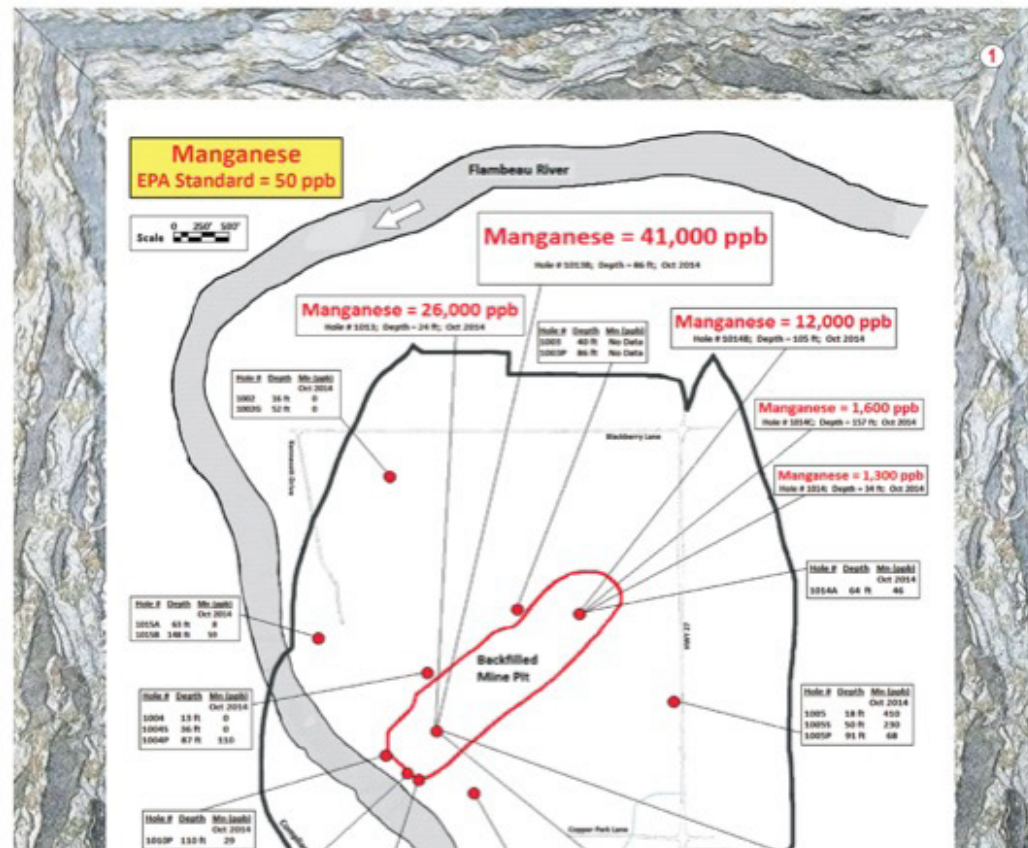
- The Court of Appeals did NOT clear FMC of violating environmental standards.
- The ruling was based on a technicality that allowed errors made by the Wisconsin DNR in its administration of the Clean Water Act to “shield” the company from prosecution.

In June 2014, the U.S. Environmental Protection Agency listed Stream C at the Flambeau Mine site as “impaired waters” due to copper and zinc toxicity linked to the Flambeau mine operation. Stream C was the issue in the Clean Water Act lawsuit.



Seven of the eight monitoring wells within the backfilled mine pit at the Flambeau mine site are highly contaminated with manganese, as documented on the company's own reports. One well had manganese levels at 41,000 ppb. Levels of 14,000 ppb can cause the kind of nerve damage seen in Parkinson's Disease.

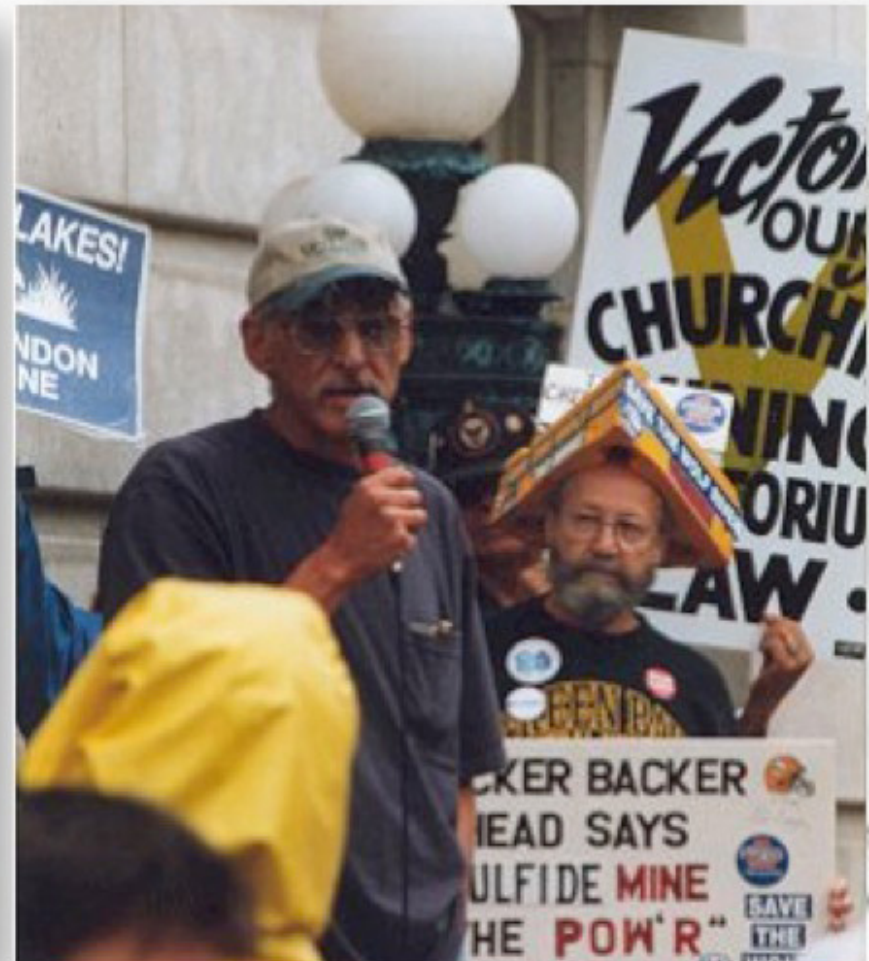
THIS MAP SHOWS CONCENTRATION OF MANGANESE IN WATER FROM TEST WELLS AT THE FLAMBEAU MINE SITE, IN PARTS PER BILLION. THE EPA UPPER LIMIT FOR DRINKING WATER IS 50 PPB. LEVELS AT FLAMBEAU ARE AS HIGH AS 41,000 PPB.



If the mining industry was not able to keep the water clean and prevent long-term pollution problems at Wisconsin's Flambeau Mine ("the newest and smallest copper mine in the world"), what can we do to protect the Menominee River at the far larger Back 40 proposed open pit mine?

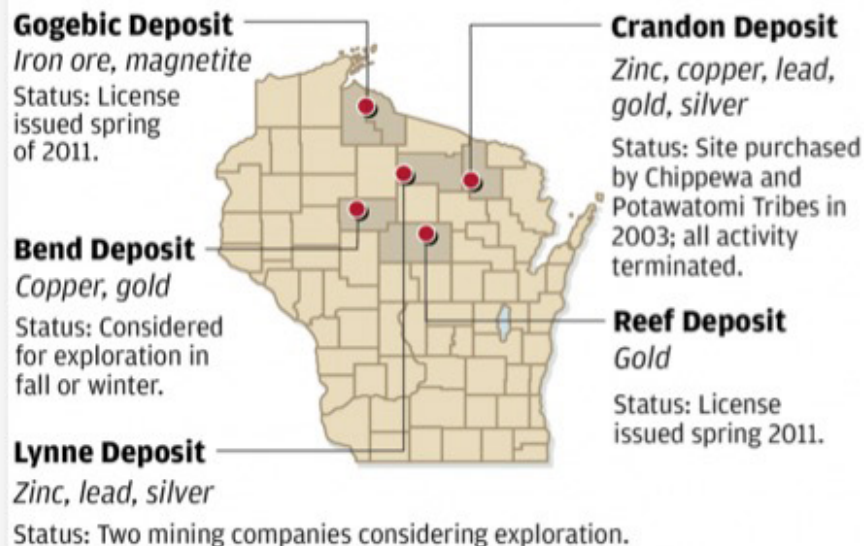


In 1998 an Indian-environmental alliance successfully lobbied for the passage of the Mining Moratorium law which prohibited the state from issuing a mine permit until the mining company could provide an example of where a metallic sulfide mine has not polluted surface and groundwaters during or after mining – “Prove It First” law



During the legislative debate on the infamous Iron Mining bill, Aquila lobbyist Ron Kuehn pushed for repeal of Wisconsin's Prove it First law. Aquila is exploring the Bend and Reef deposits in Marathon and Taylor Counties.

Metallic mining in Wisconsin



SOURCE: Wisconsin Department of Natural Resources

State Journal

- “We would take the stand that if the moratorium went away, that would be a significant signal to mining companies.”
- “The logical step is to ask the legislature to take a look at the Flambeau decision. The moratorium says a company has to prove a mine was successfully closed for 10 years...the best example of that we know of is right here in Wisconsin.”
- “Lobbyists pushing for repeal”
- *Wisconsin State Journal*
11/18/2012

In July 2009, Aquila President and CEO Tom Quigley told the Lake Township Board, in Menominee County, that the company expects to receive permits from Michigan's DEQ in 2010 and begin construction at its controversial "Back Forty" project in 2011.



**DON'T UNDERMINE
THE
MENOMINEE RIVER**

**PURE
MICHIGAN
NEEDS PURE WATER**

- Aquila ignored widespread opposition of local residents concerned about the use of cyanide to extract gold as well as the likely risk of polluting the adjacent Menominee River
- The Menominee County Historical Society called for a moratorium to stop exploratory drilling near a known archaeological site of Native American garden beds and other cultural areas.

In July 2012, HudBay Minerals said it was backing out of the Back Forty project. HudBay had a 51% ownership of the project, while Aquila had a 49% interest. HudBay's withdrawal put the project on hold. HudBay had other problems.



- HudBay faces three separate lawsuits from Indigenous Guatemalans, who allege that private security staff at a subsidiary's nickel mining project committed a gang rape in 2007, the murder of an outspoken mining critic in 2009 and a shooting that left a man paralyzed near the company's mine in El Estor.
- Church of England and a large pension fund in Norway have divested from the company over human rights concerns.

In November 2015, Aquila filed its mine permit application with Michigan's Department of Environmental Quality. There is still widespread local opposition to the project. Aquila does not have a "social license to operate."



- Mining companies that fail to obtain the support of local communities are at greater risk of protests, blockades, media campaigns, or legal challenges to their mining permit.
- Depressed base metal prices puts this project at great financial risk.

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